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Jon Lee^a, Andy J. Frey^b, Keith Herman^c & Wendy Reinke^c

^a School of Education, University of Cincinnati, Cincinnati, OH, USA

^b Kent School of Social Work, University of Louisville, Louisville, KY, USA

^c Department of Educational, School, & Counseling Psychology, University of Missouri, Columbia, MO, USA

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Motivational interviewing as a framework to guide school-based coaching

Jon Lee^{a*}, Andy J. Frey^b, Keith Herman^c and Wendy Reinke^c

^a*School of Education, University of Cincinnati, Cincinnati, OH, USA;* ^b*Kent School of Social Work, University of Louisville, Louisville, KY, USA;* ^c*Department of Educational, School, & Counseling Psychology, University of Missouri, Columbia, MO, USA*

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In school-based settings, coaching is described as a professional development practice in which a person with specialized knowledge works with a teacher to change current practices to better student outcomes. Coaching has emerged as a strategy to support the successful deployment of evidence-based interventions. Still, little is known about the coaching process itself, and the literature does not yet clearly define the activities and skills that comprise the coaching process. In this article, we explore theoretical support for motivational interviewing (MI) [Miller, W. R., & Rollnick, S. (2012). *Motivational interviewing: Helping people change*. New York, NY: Guilford Press] as a behavior change theory to guide coaching practice and research. In addition, we propose activities to conceptualize the coaching process, identify skills that are likely to contribute to successful coaching, highlight specific interventions or models that have used an MI approach to increase implementation fidelity within the context of a coaching relationship, and discuss implications for future research and practice.

Keywords: school-based coaching; motivational interviewing; teachers; behavior change; implementation fidelity

Implementation fidelity, or the extent to which a practice or intervention is implemented as intended, is increasingly recognized as a major factor underlying intervention failure, as defined by less than expected intervention outcomes. Although all service delivery systems have problems, it is especially well documented that the difficulties teachers have in learning, using and sustaining new skills contribute to low implementation fidelity in educational settings (Becker & Domitrovich, 2011; Domitrovich, Gest, Jones, Gill, & DeRousie, 2010; Hemmeter, Snyder, Kinder, & Artman, 2011; Mesa, Lewis-Palmer, & Reinke, 2005; Riley-Tillman & Eckert, 2001).

A number of experts in the field of education have acknowledged the importance of being able to influence teacher behavior, particularly within the context of successful intervention deployment. For example, Hagermoser Sanetti and Kratochwill (2008) state: 'without question, there is a gap between the methodological importance of ensuring treatment integrity and the available empirical support for intervention strategies to promote treatment integrity' (p. 451). The importance of implementing interventions as intended has increased pressure for instructional support providers (e.g., school social workers, school psychologists, school counselors, behavior specialists, resource teachers, and so forth) to attend systematically to treatment integrity issues and outcomes. The National Association of School Psychologists (2005) promotes attention to treatment

*Corresponding author. Email: lee4jn@ucmail.uc.edu, jonathan.lee@uc.edu

integrity in a published position statement, and the National Association of School Social Workers (2011) includes it in their national standards.

Coaching has emerged as a strategy to support the successful deployment of evidence-based interventions (Driscoll, Wang, Mashburn, & Pianta, 2011; Noell, Duhon, Gatti, & Connell, 2002; Pas, Bradshaw, & Cash, 2014). Denton and Hasbrouck (2009) describe coaching as a professional development practice in which a person with specialized knowledge works with a teacher to change current practices. Driscoll et al. (2011) found that teachers were 13 times more likely to implement an intervention when they had access to a coach. Several other studies have found that access to support such as a coach resulted in greater self-efficacy and better implementation (Forman, Olin, Hoagwood, Crowe, & Saka, 2009; Ransford, Greenberg, Domitrovich, Small, & Jacobson, 2009; Wenz-Gross & Upshur, 2012). After conducting a systematic review of the coaching literature, Stormont, Reinke, Newcomer, Darney, and Lewis (*in press*) concluded that 83% of interventions that used a coach as a component of the intervention had positive results. They note, however, that most studies involving coaches employed skilled professionals from outside the school.

Despite the promise of coaching as a professional development strategy, relatively little is known about the process. Reinke, Stormont, Herman, and Newcomer (2014) recently examined specific elements of coaching in a study with 52 teachers implementing a classroom level intervention. They looked at the relationship between increases in intervention implementation and (1) providing performance feedback, (2) action planning, (3) modeling, (4) reviewing, (5) role-playing, and (6) goal setting. Two-way repeated measures analyses (ANCOVA) using four time points across the school year demonstrated significant associations between amount of time coaching and improvements in implementation fidelity (Wilk's $\lambda = .86$, $F(2, 47) = 3.90$, $p < .05$, $\eta^2 = .14$), yet providing performance feedback was the only activity associated with this desirable outcome (Wilk's $\lambda = .86$, $F(2, 47) = 3.81$, $p < .05$, $\eta^2 = .14$). The authors recommend the results be interpreted cautiously because the study was based on the activities of a single coach and some activities (e.g., modeling) occurred too infrequently to analyze. However, the results are consistent with Hagermoser Sanetti and Kratochwill's (2008) conclusion that performance feedback is the only strategy to promote treatment integrity with a systematic line of research.

Another strategy with evidence of effectiveness is the use of motivational interviewing (MI), although this is found mostly outside the context of school-based coaching. Originally developed in the context of alcohol and health-care treatment, MI has been effectively and strategically applied in a wide range of settings including where treatment fidelity is important. Recent literature has extended the application of MI to teacher-coaching contexts (Frey, Lee, et al., 2013a; Lee et al., 2014; Reinke, Herman, & Sprick, 2011).

In this article, we (1) explore theoretical support for MI as a behavior change theory to guide coaching practice and research, (2) propose activities to conceptualize the coaching process, (3) identify MI skills that are likely important for successful coaching, (4) highlight specific interventions or models that have used MI to increase implementation fidelity within the context of a coaching relationship, and (5) discuss implications for research and practice.

Theoretical support

Over the past three decades, research related to MI has provided insight into the underlying mechanisms affecting behavior change. Miller and Rose (2009) suggest that this cumulative body of research indicates two likely active ingredients to behavior change

from the perspective of MI: (1) a relational component in which the development of a working alliance is a central construct, and (2) a technical component, which involves the differential application of MI skills across four processes. Miller and Rollnick (2012) describe MI as a set of overlapping and recursive processes that include a working alliance (engaging), a particular agenda (focusing), eliciting language in support of change (evoking), and discussions about what and how to go about making desired changes (planning). Each process identifies client utterances and appropriate responses to them. We begin with the relational component and the building of a working alliance with the client (hereafter referred to as the teacher).

Relational component

The first active ingredient in the practice of MI, the relational component, is a ‘spirit.’ The practitioner develops a working alliance and a coaching environment that allows for the interrelated application of four essential elements to that spirit: partnership, acceptance, compassion, and evocation (Miller & Rollnick, 2012). By being in *partnership* with a teacher, for example, a skilled MI coach avoids the role of an expert and joins in the process of change from the perspective of a teacher. The coach refrains from fixing what is broken in favor of learning what is important in this process to the teacher and recognizing the teacher’s autonomy in the process. Teachers might experience the spirit of partnership in the realization that they are not being cajoled into change, but are being supported as they explore their personal motivations for change.

Coaches demonstrate *acceptance* through an unconditional positive regard (Rogers, 1980) and a belief in the other’s potential for change. The coach affirms the strengths of the teacher, empathizes with accuracy (avoiding sympathy or pity), and provides for the teacher’s autonomy and self-direction. Empathy has been widely studied within MI.

A coach who pursues the welfare of a teacher, placing the needs of the teacher before his or her own, is said to be *compassionate*. Compassion within MI does not equate to sympathy or any other emotion experience, but reveals itself in the coach’s commitment and promotion of the self-identified interests of the teacher.

Evocation is the guiding principle that the teacher rather than the coach should be voicing the arguments for change. This principle was informed by Festinger’s (1957) formulation of cognitive dissonance and Bem’s (1967) theory of self-perception. Thus, what the interviewee has within guides the pursuit of change; the task of the coach is to evoke the particulars from a strength-based perspective.

Technical component

The second active ingredient to behavior change within a MI stance, as proposed by Miller and Rose (2009), the technical component, is the use of MI-consistent interviewing skills for the purpose of recognizing and evoking ‘change talk.’ Prior to proceeding to the activities and skills that comprise our proposed framework for guiding school-based coaching, a brief review of two key MI concepts: change talk and sustain talk.

Change and sustain talk

‘Change talk’ is *verbalization that reveals the person’s own motivation to change*, and ‘sustain talk’ is *verbalization that supports the status quo*. The only reliable and valid mechanism for evaluating MI proficiency – that is, application of MI skills across the four

processes in authentic practice settings – is by directly coding practice samples. In this way, Apodaca and Longabaugh (2009) have established that MI is distinct from placebo control conditions, treatment-as-usual conditions, and other active treatment conditions with regard to both MI-consistent and -inconsistent therapist responses. MI-consistent methods constitute the technical aspect of MI practice. Evidence is beginning to emerge in substance-abuse and mental-health settings to support the hypothesis that proficient use of MI increases clients' in-session change talk while decreasing sustain talk.

In a classic study demonstrating the impact of therapist behavior on parent noncompliance in the field of mental health, Patterson and Forgatch (1985) demonstrated that a therapist's efforts to change parent behavior through teaching and confronting elicited immediate parent noncompliance, whereas efforts to support parents decreased the likelihood of noncompliance. These authors argued that social learning interventions require two different sets of skills – one for implementing effective practices and the other for managing noncompliance. Responsiveness of change talk to therapist style has been replicated repeatedly in substance-abuse literature. For example, Moyers and Martin (2006) and Moyers, Martin, Christopher, et al. (2007) found that MI-consistent therapist behavior was followed by client change talk.

Researchers have found that increased change talk and decreased sustain talk predict behavior change. Initial sequential analyses by Miller, Benefield, and Tonigan (1993) identified a negative correlation between sustain talk and favorable drinking outcomes, but no relationship between change talk and outcomes. However, when the same tapes were analyzed by Paul Amrhein, a psycholinguist, he differentiated change talk into the subcategories of desire ('I want...'), ability ('I can...'), reasons ('If I change, then...'), and need ('I have to change, or...'), which all predicted commitment to change. He also found strength of *commitment language* (i.e., talk that involves the mobilization of change e.g., 'I plan to praise this child when I notice her attending to my instruction.') was a robust predictor of behavior change (Amrhein, Miller, Yahne, Palmer, & Fulcher, 2003). It was not the amount of change talk that predicted change (as was previously tested), but the increase of change talk over the course of an interview. Specifically, the slope of commitment change talk toward the end of the interview was associated with abstinence one year after treatment. A cluster analysis that categorized changers, maintainers, and strugglers confirmed the importance of the slope of commitment language, with the commitment of strugglers dropping toward the end of the interview.

These findings were replicated in the context of cognitive therapy for drug use (Aharonovich, Amrhein, Bisaga, Nunes, & Hasin, 2008) and gambling treatment (Hodgins, Ching, & McEwen, 2009). Extending this line of inquiry, Moyers, Martin, Christopher, et al. (2007) found that change talk and sustain talk predicted drinking outcomes – even when baseline levels of readiness to change and alcohol use were accounted for – but that they operated independently.

This body of knowledge has implications for current models of coaching that focus on the number of 'sessions' completed or total coaching hours as predictors of change. Educational researchers are beginning to pick up the MI mantle across applications with parents and teachers, alone and in conjunction with other evidence-based practices (Connell, Dishion, Yasui, & Kavanagh, 2007; Dishion & Kavanagh, 2003; Frey, Lee, et al., 2013a, 2013b; Herman et al., 2012; Lee et al., 2014; Reinke, Herman, & Sprick, 2011; Reinke et al., 2012; Reinke, Lewis-Palmer, & Merrell, 2008; Stormshak, Dishion, Light, & Yasui, 2005). If our understanding of the relationship between these variables within the context of school-based coaching were improved, it would allow researchers and practitioners to more intentionally and efficiently target the malleable factors

associated with favorable child outcomes. Next, we propose coaching activities and skills consistent with the relational and technical components of MI practice.

Coaching activities

Without clearly defined activities, establishing an organizational scheme to articulate various coaching approaches and strategies, as well as to analyze and compare alternative models, is difficult at best. Defining coaching activities might also facilitate the systematic examination of the social validity of these activities alone and in combination, and analysis of the relationship between coaching activities, implementation fidelity and parent, teacher and child outcomes. We believe that MI provides a framework to conceptualize these activities that may accommodate most, if not all, coaching models.

The Motivational Interviewing Navigation Guide (MING) has been proposed as a model to guide the coaching process by enhancing engagement and implementation fidelity of existing interventions (Frey, Lee, et al., 2013a; Lee et al., 2014). Building on this model, we propose four activities to conceptualize the coaching process for school-based applications: (1) build a working alliance; (2) assess current practices; (3) share performance feedback; and (4) offer extended consultation, education, and support. These are grounded in the four processes of MI: engaging, focusing, evoking, and planning. Table 1 provides examples of coaching tasks that could be classified in this activity structure.

Many activities involved in formal coaching relationships can be categorized in these domains. Coaching models can be compared and contrasted by the skills required to complete these activities, as well as the relative amount of time dedicated to each activity. In addition to being useful for describing coaching models, this conceptualization provides a useful framework for measuring the intensity (i.e., dosage) of coaching activities in the context of applied research, for examining the social validity of various coaching activities, and for organizing dose–response analyses. For example, in a recent study of the Tertiary First Step to Success intervention (Frey et al., 2014), dosage for the home component was calculated as a percentage of MING steps completed. Twenty-five parents

Table 1. Coaching activities and tasks.

Activity	Tasks
Build a working alliance	Evoke the teacher's perception of need for the evidence-based practice Identify potential barriers to implementation Discover and affirm the teacher's values Informally assess the classroom ecology
Assess current practices	Collect data through formal and informal interviews, direct observation
Share performance feedback	Provide graphic display of performance Evoke teacher's perception and interpretation of observational data Encourage teacher to reflect on current practices
Offer extended consultation, education and support	Provide information on intervention components (educate) Encourage and support goal setting Model effective implementation; role-play new skills Offer repeated observations and performance feedback

(76%) completed 75% or more of the steps of the home component. Seven parents completed two or fewer steps and were considered non-completers. Of the 25 parents who completed the required components, 14 (60%) committed to and developed a change plan, and most (87%) of those parents implemented it. Eight parents (24%) ended their participation in the program before the formal invitation for closure was offered. The authors examined associations between dosage and change in parent and child outcomes employing covariate-adjusted regression models, but found no statistically significant associations between dose of the home component and the home-based outcome measures.

MI skills

Table 2 lists four skills that are foundational in the application of MI, and may be helpful to efficiently and effectively complete the coaching activities described earlier. Summarized by the OARS acronym, these skills are derived from the client-centered counseling literature (Rogers, 1959) and reviewed here from the perspective of MI within the context of school-based coaching.

The skills are applied differentially across coaching activities and in response to change versus sustain talk. The skills are used strategically to cultivate the importance of the proposed change in light of the teacher’s previously identified values and to increase the confidence with which the teacher will approach the change process. Although these skills are common in clinical counseling and are taught in degree programs that prepare social workers, psychologists, and school counselors, in our experience they are under-utilized in school-based coaching models. On the other hand, educators and educational administrators can learn and apply OARS in coaching interactions (Frey et al., this issue). We next proceed to describe the use of these skills within and across the four coaching steps described earlier: (a) build a working alliance, (b) assess current practices, (c) share performance feedback, and (d) offer extended consultation, education, and support.

Build a working alliance

When building a working alliance, open-ended questions and affirmations are prominent. They are used to discover and affirm a teacher’s values, goals, and ideals (e.g., ‘Can you share with me your teaching values, goals, and hopes for your students’ future?’ and ‘You care deeply about the students in your class.’). Reflective practice and the use of summaries allow the coach to check for understanding. During this initial stage of the

Table 2. MI skills (OARS).

Method	Description
Open-ended questions	Questions that invite the teacher to elaborate. One or a combination of the methods below typically follows open-ended questions.
Reflections	Reflections are not questions, rather statements that indicate your assumption of their meaning and ‘elicit more talk from the client, particularly change talk’ (p. 71). Change talk is preferentially reflected.
Affirmations	Responses that notice, recognize, or acknowledge strengths, abilities, effort, actions, or movement toward change.
Summaries	Summaries include linking together prior statements the teacher has uttered, either for the purpose of encouraging the teacher to reflect on the relationship between the two, clarifying ambivalence, amplifying change talk, solidifying commitment, or transitioning to new topics.

process, complex reflections and the evocation of change talk may be perceived as attempts to ‘sell’ the change process or ‘educate’ the teacher and are not encouraged (e.g., ‘Because you care so deeply about the students in your class, you are willing to change your classroom management practices.’).

Assessment of current practices

Open-ended questions and affirmations remain prominent during the assessment of current practices, when they are used to explore teacher practices/behaviors related to the implementation fidelity of existing interventions or evidence-based practices being considered. Additionally, open-ended questions are used in response to change talk to narrow the focus of the interview and highlight, without judgment, current teacher practice that is consistent or inconsistent with identified values and goals. For example, a teacher might offer this change talk: ‘I’ve got to do something about this mess!’ An appropriate coach response would be: ‘You care about these kids and you’re ready for a change! If you were to focus on your current management system, what would you do differently?’ Complex reflections and summaries frame the discussion of existing interventions or evidence-based practices being considered. In response to sustain talk, the coach politely acknowledges the teacher, but does not encourage elaboration; this is often accomplished with a simple reflection, followed by an open-ended question in order to gently shift the topic. For example, a teacher might offer this sustain talk: ‘I am way too busy.’ An appropriate coach response would be, ‘You’ve got a lot on your plate. Are there any potential benefits to modifying your current classroom management system?’

Share performance feedback

An open-ended question often begins the sharing of performance feedback and is used to solicit the teacher’s impression of data that have been collected (e.g., ‘What do you make of the information I have shared with you?’). Affirmations are used to highlight autonomy and commitment to the process of investigating the possibility of change (e.g., ‘You’ve noticed a number of challenges represented by these data. The decision to address these issues is yours to make; where would be a good place to start?’). Open-ended questions, complex reflections, and summaries are the primary vehicles to develop discrepancy and cultivate importance (Miller & Rollnick, 2012). They are used to explore any gaps between previously stated values and goals and examine the advantages of improving the implementation fidelity of existing interventions or the implementation of evidence-based practices. In order to anchor a sense of confidence in a teacher’s ability to change, coaches use carefully phrased reflections and observations from the assessment of current practices that highlight teachers’ strengths and competencies (e.g., ‘You care deeply about these children, and I’ve observed the positive feedback you provide them first hand, but you’re concerned that it’s not enough – there may be more you can do.’).

Extended consultation, education, and support

Of the four activities, extended consultation, education, and support are the most typical of coaching practices in educational settings. What is unique about an MI approach to coaching is that it prefaces and situates the planning and implementation aspects of coaching within the motivation context of the four MI processes. The coach facilitates the development of a change plan, provides educational activities to inform that plan, and

works to scale any identified barriers to the implementation of the plan. During this step, the working alliance must be monitored and bolstered if the relationship becomes strained. During this step, coaches respond to sustain talk with open-ended questions (e.g., ‘Walk me through the plan, and tell me what did and did not work.’). They use affirmations to acknowledge persistence, and they use complex reflections to reinforce the importance of change. Coaches enhance a teacher’s confidence by highlighting his or her strengths and competencies.

Specific applications of MI coaching to increase implementation fidelity

Due to the increased use of MI to facilitate behavior change in parents and teachers through coaching relationships, many applications of MI as a coaching framework have emerged over the past decade. Perhaps the first and most studied among these extensions of MI was the Family Check-Up (FCU). Building on the development of MI check-ups for substance use problems, Dishion, Nelson, and Kavanagh (2003) developed the FCU as a brief motivation enhancement approach for increasing parent’s use of positive behavior supports in the home. Originally conceptualized as part of a multi-tiered approach to youth behavior problems, the original FCU consists of three-sessions delivered by clinicians in public schools. Clinicians conduct an intake interview with parents, collect ecological assessments of youth and family functioning at home and school, and deliver feedback to parents based on the collected data. All sessions are delivered with attention to the relational component of MI. Multiple clinical trials in a range of settings have demonstrated that the FCU produces lasting changes in parent behaviors and student outcomes (Boyd-Ball & Dishion, 2006; Connell et al., 2007; Dishion & Kavanagh, 2003).

Realizing that many of the same motivation and skill barriers to effective parenting practices also interfere with teacher implementation of effective practices, Reinke, Herman, and Sprick (2011) developed the Classroom Check-Up (CCU). The CCU is a teacher coaching model aimed at improving class-wide behavior management practices, as opposed to the more common teacher consultation models that support teachers in intervening with specific problematic students. The CCU involves a sequential problem-solving process implemented within the context of the relational component of MI. Like the FCU, the CCU includes an intake interview, ecological assessments, and personalized feedback. The assessments focus on critical classroom variables known to impact effective instruction. After direct observation of critical classroom variables, the CCU coach gives feedback to the teacher, and then develops an action plan based on the feedback and the teacher’s preferences. Support for the CCU comes from the positive outcomes of several multiple baseline studies that explored changing class-wide behavior management practices (see Reinke et al., 2011).

Both the FCU and CCU were originally developed as stand-alone coaching models intended to encourage use of more effective parent or teacher practices. More recent applications of MI coaching have focused on extending the FCU and CCU to enhance implementation fidelity to specific interventions. For example, Reinke et al. (2012) used the CCU as a coaching model for increasing teacher implementation of the PATHS to PAX program, an enhanced version of the Good Behavior Game, and the PATHS intervention, a teacher-delivered social–emotional curriculum. Teachers who struggled with implementing these programs received individualized coaching based on the CCU model. The primary adaptation of the CCU for this purpose was to collect the performance data and giving it as feedback to teachers. The feedback focused not on classroom

management but on critical aspects of implementation for each of the programs (e.g., how often and with what quality the teacher delivered the lessons or played the game). In a pilot study, the CCU plus PATHS to PAX coaching model had high levels of social validity as rated by teachers and coaches; teachers who received the CCU had a significant improvement in their classroom atmosphere as rated by independent observers (Reinke et al., 2012).

In a similar manner, Herman et al. (2012) used the FCU as a platform for facilitating parent involvement in the evidence-based Coping Power (CP) program. CP is a coping skill-training program for aggressive youth (fourth and fifth graders) that includes a parent-training component (Lochman & Wells, 1996, 2004). Prior studies have shown that parent participation enhances youth outcomes, but overall CP parent participation tends to be low. In the initial attempt to extend standard CP to urban schools, we found that parent attendance in the program sessions was virtually zero. Thus, the FCU was used as entry into the CP parent program in hopes of increasing participation and positive outcomes.

We conducted a pilot study to evaluate the feasibility, social validity, and impact of the integrated model. Three school-based clinicians were trained and supervised to deliver the FCU plus CP intervention. Sixteen youth and their caregivers were recruited to receive it. School-based clinicians were encouraged to identify elementary-aged students with behavior problems at school and with difficult-to-reach parents who were not active participants in school programming. Youth ranged in age from 6 to 10 and had significant behavior problems at school and home (mean baseline *T*-scores of teacher and parent ratings of externalizing behavior on the BASC-2 were 82 and 71, respectively). All youth were African American. Primary caregivers included 14 mothers and 2 grandmothers. Four father or father figures participated in the project, as well. Sixty-two percent of caregivers reported family incomes below \$20,000 per year.

Results indicated that parents and school-based clinicians perceived the integrated model as culturally responsive, socially relevant, and helpful in reducing youth behavior problems (Herman et al., 2012). In previously unreported data, we found an increase in parent participation: 75% of parents (12) attended both FCU sessions. Of the parents who completed the FCU sessions, 75% completed one or more CP modules, and 50% attended six or more CP sessions. This contrasts strongly with near-zero participation rates in CP without the FCU, which we observed in our prior work in urban settings.

In recent applications, MI has also been used to guide intervention development. Rather than front loading an existing intervention for the purpose of increasing engagement and implementation fidelity, the MI approach was central in creating intervention procedures, resources, and tools for interventions that rely on a coach for implementation. The MING, described earlier, was recently used to develop a home component to the Tertiary First Step to Success, an early intervention for children with behavior disorders (Frey, Walker, et al., 2013b). The First Step CCU, a universal intervention for improving classroom management, was created (Frey, Walker, et al., 2013a). The procedures for both of these interventions mirror MING steps, and the coaches' use of MI (relational and technical components) was conceptualized as an indicator of implementation fidelity (quality). Both intervention procedures have been evaluated by pilot studies. The Tertiary First Step intervention was evaluated via a quasi-experimental design with 55 child–teacher–parent triads (Frey et al., 2014), while the First Step CCU used a sub-sample of these triads in an open case-study design focusing on 12 of the teachers (Lee et al., 2014). In both studies, MI proficiency as an indicator of implementation fidelity was examined.

In the evaluations of the Tertiary First Step and First Step CCU, the Motivational Interviewing Treatment Integrity (MITI) code (Moyers, Martin, Manuel, Miller, & Ernst, 2007) was used to provide evaluative performance feedback to behavioral coaches and to measure MI skill as an indicator of implementation fidelity. The MITI code allows investigators to rate the implementation of the relational component of MI on a five-point Likert-type scale ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (5). Moyers, Martin, Manuel, et al. (2007) suggest practitioners of beginning proficiency with the relational component of MI should average 3.5, while practitioners who are competent in this area will average 4. Coach utterances are also assigned behavior codes, and frequencies are recorded to account for these technical skills: (a) closed question, (b) open-ended question, (c) simple reflection, (d) complex reflection, (e) MI-adherent, (f) MI-non-adherent, and (g) information giving. Moyers, Martin, Manuel, et al. (2007) suggest related competency thresholds for coach behaviors (see Table 3) that include the following ratios: complex reflections to total reflection; reflections to questions; open-ended questions to closed-ended questions; and MI-adherent statements to non-adherent statements.

The three coaches who conducted these interventions had no previous experience with MI before they were trained for the study. Of 55 scheduled interviews between the coach and a parent or teacher, we had consent to audio record 45. Of these, 15 were randomly selected from the home and First Step CCU components (30 in total). Start times were randomly selected, and each tape was coded for 20 min. All coaches exceeded the MITI competency criteria (see Table 3) for the relational ratings ($M = 4.33$, $SD = .57$). Mean scores for the five relational dimensions ranged from 4.07 (understand and reflect; $SD = .74$) to 4.26 (expert role and collaboration; $SD = .76$). Additionally, coaches met the beginning proficiency level for the reflection-to-question ratio with a mean ratio of 1.82 ($SD = 1.49$) and for percent open-ended questions with an average percent of 56 ($SD = .24$) across the 30 audio-recorded sessions.

Implications for future research

We support Domitrovich et al.’s (2008) call for theory-driven research on program implementation. We believe examining the coaching process, as a strategy to improve implementation fidelity, is an important aspect of implementation science research. Because coaching-related research is in its infancy, there is a need for exploratory research to better understand existing coaching processes. For example, it would be helpful to know what activities and tasks are currently used for coaching and which skills coaches currently use to influence adult behavior. It would also be helpful to compare and contrast coaching

Table 3. MITI Suggested competency thresholds.

Summary code (means of calculation)	Beginning threshold	Competency threshold
Relational ratings	Mean of 3.5	Mean of 4
Reflection-to-question ratio (total reflections/open questions + closed questions)	1	2
Percent open questions (open questions/open questions + closed questions)	50%	70%
Percent complex reflections (complex reflections/total reflections)	40%	50%
Percent MI adherent (MI adherent/MI adherent + MI non-adherent)	90%	100%

or instructional models or frameworks. This article provides guidance for how researchers might go about conceptualizing and collecting information to better understand various approaches to coaching.

In addition to understanding more about the current activities, future research is needed to develop a more nuanced understanding of the empirical relationship between coaching, implementation fidelity, and child outcomes. Although performance feedback may be the only current strategy with empirical support, decades of research in clinical practice in other fields suggests that relationship building may be an important activity, and Reinke et al. (2014) suggest that increasing capacity-building strategies for natural implementers may also be important. It is imperative to better understand how various coaching activities relate to implementation fidelity and outcomes. It is also important to assess teacher satisfaction with a range of coaching activities.

Increasing our understanding of the skills used by coaches is another aspect of future exploratory research. For example, discovering how coaching skills are applied across different aspects of the coaching process would be informative. We have suggested that MI skills (open-ended questions, affirmations, reflections, and summaries) likely contribute to successful coaching. Measures are currently under development (see Small et al., this issue) that show promise for evaluating existing skills and responsiveness to change following participation in professional development activities. We believe MI proficiency measures (i.e., MITI) could be a standard indicator of implementation fidelity (quality of implementation) within MI-based coaching research. We are not aware of other frameworks that identify, much less evaluate, coaching skills in this fashion.

Although the relationship between MI-consistent methods, change talk, and behavior change has been observed in other contexts (see Aharonovich et al., 2008; Apodaca & Longabaugh, 2009; Hodgins et al., 2009; Moyers & Martin, 2006; Moyers, Martin, Christopher, et al., 2007), similar studies are needed to understand the relationship between these variables in the context of the coaching process. For example, there is a need to conduct sequential analyses to demonstrate that competent use of MI by coaches increases teacher or parent change talk and decreases verbalizations that support the status quo (i.e., sustain talk). Research is also needed to identify which coaching activities and skills are associated with increases in implementation fidelity and, in turn, desirable outcomes. If associations between these variables exist, additional research could focus on moderators and mediators within this process.

An additional line of research will need to focus on minimal competencies that are necessary in school-based settings. The MITI thresholds were established within clinical counseling contexts, largely in the field of substance use/abuse treatment, and were based primarily on expert opinion. Common markers of competence established in clinical settings may not be relevant for school practices, given vast differences between the settings and expectations of participants. These different contexts may require differentiated markers of MI competence from those posited for clinical practice (Moyers, Martin, Manuel, et al., 2007), as they may be untenable, or even iatrogenic, in school interactions. Prior research suggests that fairly intensive training (two full-day workshops) followed by ongoing supervision or consultation is needed to increase the use of MI-adherent interactions and decrease MI-non-adherent interactions to the threshold of competent delivery of the method (Miller, Yahne, Moyers, Martinez, & Pirritano, 2004).

The research agenda described above is largely dependent on our ability to efficiently and accurately measure MI skill and proficiency in the context of the school-based coaching process. As mentioned earlier, measures to do this are currently under development (see Small et al., this issue).

Implications for practice

The coaching framework here provides an organizational scheme now lacking for educational coaches, and it has implications for school-based professionals who strive to change teacher or parent behavior. First, an organized framework provides language (e.g., components, activities, and skills) that will increase practitioners' ability to describe and reflect on their coaching activities. It is possible that the MI-based coaching framework presented here is a fairly radical shift for school-based coaches. For example, the relational component, in particular, may be quite different for coaches who are accustomed to working within an educational hierarchy to promote behavior change. The model encourages time be spent for the sole purpose of building relationships, which may be a novel idea. Sharing data and performance feedback and soliciting the teachers' impression before interpreting data for them may also be new for coaches. We believe that this framework provides language and an organizational schema for describing and reflecting on the activities and skills used by coaches.

The framework also has implications for the preparation of school-based coaches (pre-preparation and ongoing professional development). Effective preparation in coaching, whether based on this framework or another, has the potential to increase intentionality, efficiency, and effectiveness. Many instructional support providers (e.g., school social workers, school psychologists, school counselors, behavior specialists, and resource teachers) may already have the requisite foundational skills for the relational component, whereas others will not have any prior exposure to these basic skills. Thus, tailored training may be needed, depending on prior training and experience. In addition, school-based personnel may not be experienced with the technical components necessary to apply MI effectively. To achieve proficiency in the consistent application of MI skills requires more training and supervision than is commonly provided in educational settings.

Time constraints may hinder the practice of MI in school settings, since both teachers and parents have limited time to devote to frequent or lengthy consultation meetings. Other difficulties may arise with parents who have not experienced the importance of education, are alienated, or lack the confidence to engage fully their children's teachers.

Without doubt, there are obstacles to implementation unique to educational settings. Readers are referred to Frey, Lee, et al. (2013b) and Lee et al. (2014) for a thorough review.

Conclusion

Coaching is a promising approach for fostering effective practices in schools and in turn impacting desired student outcomes. MI is not the only lens through which the coaching process could be examined. However, MI does have theoretical support, and some preliminary empirical support, to suggest this framework has potential to advance the knowledge base related to the coaching process.

Although coaching has been a common practice in schools and in school-based trials for decades, only recently have investigators begun unpacking the *what* and *how* of coaching. Coaching is an intervention in itself. As with the study of any intervention, before determining if coaching is effective, we must first define clearly what it is. MI holds potential for providing a framework for defining effective coaching practices by drawing on the extensive literature and theory already in place for this well-established approach. Continued examination of coaching through an MI lens will help define the practices that make a difference for fostering change in schools.

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